Market Eugenics Without Swastikas: Polygenic Embryo Selection in the Shadow of Nazi and Apartheid Histories

Douglas C. Youvan

doug@youvan.com

www.youvan.ai

November 22, 2025

In New York City's subway, bright posters now invite passersby to "Have Your Best Baby," advertising a $9,999 IVF package that ranks embryos by polygenic scores for disease risk, height, eye color, and even predicted IQ. Behind the branding stands a familiar coalition: elite venture capital, a drop-out founder promising disruption, and a culture of anxious, competitive parenting. What looks like a consumer upgrade to reproduction, however, sits in the long shadow of twentieth-century eugenics, from Nazi racial policy to apartheid biopolitics. The names and symbols have changed; swastikas are gone, dashboards and risk curves have arrived. Yet the underlying logic—sorting possible humans into "better" and "worse" based on their genomes—remains disturbingly continuous. This paper traces that continuity without collapsing crucial differences. It examines Nucleus Genomics and similar firms as exemplars of "market eugenics," contrasts their voluntary, data-driven selection with state violence under Nazism and apartheid, and reflects on the painful ironies of Jewish commuters and investors moving through this new landscape. Drawing on the logostic language of q(t) and τ(t), it argues that polygenic embryo selection embodies a powerful but misdirected optimization of the world's q, while the Christian vision of children as gift rather than product points toward a different τ—one that cannot be captured by a genetic leaderboard.

Keywords: polygenic embryo selection, market eugenics, Nucleus Genomics, IVF, Nazi eugenics, apartheid, Peter Thiel, venture capital, genetic optimization, designer babies, Jewish memory, Fritz Thiel, biopolitics, logostics, q(t) and τ(t), Christian ethics, Beatitudes, bioethics, technocracy, reproductive technology.

A collaboration with GPT-5.1-Thinking-Extended. 36 pages. CC4.0.

Outline

1. Introduction: Market Eugenics Without Swastikas
1.1 Setting the scene in the NYC subway
1.2 From “Have Your Best Baby” to ranking possible humans
1.3 Remembering what “eugenics” meant in the twentieth century
1.4 A logostic roadmap: q(t), τ(t), and why this argument matters now

2. Making Designer Babies Look Normal: Nucleus Genomics as Case Study
2.1 The business model: IVF, embryo biopsy, and polygenic dashboards
2.2 What the $9,999 package buys: traits, IQ, and “best” embryos
2.3 Advertising the baby as upgrade: language, imagery, and aspiration
2.4 Voluntary, individualized, data-driven—and still structurally eugenic

3. Defining Eugenics: From Nazi Biopolitics to Contemporary Genetics
3.1 Core components of Nazi eugenics: hierarchy, coercion, and killing
3.2 “Life unworthy of life” and the medicalization of violence
3.3 Postwar eugenics: sterilization programs, population control, and amnesia
3.4 Conceptual criteria for calling something eugenic in the present

4. Polygenic Scores, Uncertain Science, and the Illusion of Control
4.1 What polygenic risk scores can and cannot do
4.2 IQ, height, and complex traits: variance explained versus hype
4.3 Trade-offs, pleiotropy, and the unknown costs of optimization
4.4 How statistical uncertainty disappears in parental anxiety and marketing

5. From State Eugenics to Venture Eugenics: Capital, Thiel, and Techno-Elites
5.1 The shift from state monopoly to platform capitalism
5.2 Peter Thiel, mining under apartheid, and the global trajectory of power
5.3 Venture capital as quiet selector of which futures get built
5.4 Market pressure as soft coercion: when “choice” becomes expectation

6. Genealogy, Resistance, and the Fritz Thiel Problem
6.1 Who Fritz Thiel actually was: precision engineer and Red Orchestra martyr
6.2 The temptation to anchor present critiques in heroic or villainous ancestry
6.3 What we can and cannot say about Peter Thiel’s grandparents
6.4 Beyond bloodlines: how ideas and systems outlive the people who opposed them

7. Holocaust Memory, Jewish Participation, and the Ironies of Market Eugenics
7.1 Jewish commuters passing “best baby” ads in a city of survivors
7.2 Jewish and Israeli-linked investors in polygenic embryo selection
7.3 Trauma, safety, and the desire to be on the “right side” of the next sorting
7.4 Critiquing systems without ethnic blame: precision in language and judgment

8. A Logostic Reading: q_world(t), τ_child(t), and the Gift of the Person
8.1 q_world(t) as anxious optimization basin: fear of illness and failure
8.2 τ_child(t) as manifold of gift, dignity, and unpredictability
8.3 Leaderboards versus Beatitudes: whose criteria count as “success”?
8.4 Children as covenant, not project: resisting curvature toward productization

9. Christian and Secular Bioethical Alternatives to Market Eugenics
9.1 Existing guidelines: disease prevention versus trait selection
9.2 Advertising limits, informed consent, and truthfulness about uncertainty
9.3 Churches, synagogues, and mosques as communities of refusal and care
9.4 A minimal ethic: never ranking a life’s worth by its predicted genome

10. Conclusion: Resisting Market Eugenics Without Swastikas
10.1 What is genuinely new and what is depressingly familiar
10.2 Naming market eugenics clearly without reckless accusations
10.3 How to live and parent without joining the genetic arms race
10.4 Final reflection: keeping the child a mystery rather than a product

11. References

1. Introduction: Market Eugenics Without Swastikas

1.1 Setting the scene in the NYC subway

The subway car is bright and tired at the same time. Fluorescent light bounces off steel poles, commuters scroll their phones, and above their heads a poster shouts in pastel typography: "Have Your Best Baby." Beneath the slogan, a sleek graphic suggests science, optimization, and care: polygenic testing, trait insights, smarter choices. A price anchor sits almost casually in the corner: $9,999.

On the platform, trains thunder in and out of stations built when different empires imagined different futures. In the car itself, a quiet sorting is underway. Some riders barely notice the ad; others feel a slight unease they cannot name. A few know enough about embryo biopsy, whole-genome sequencing, and polygenic scores to recognize what is really being offered: not a simple test, but a ranked list of possible children, scored on their predicted genetic desirability.

This is not a backstreet clinic whispering about designer babies. It is aspirational branding, openly purchased in a major public transit system. The message is not "We will fix disease," but "We will help you choose the best child you can get." In that small semantic shift—from healing to optimizing—an old logic steps quietly back into the room.

1.2 From "Have Your Best Baby" to ranking possible humans

On the surface, the offer seems benign, even responsible. Parents already care about their children's health and future. They already submit to prenatal screens, agonize over ultrasound results, and search for anything that might reduce the risk of suffering. Polygenic embryo selection presents itself as an extension of that care: more data, more foresight, more control.

But once parents are shown a ranked list of embryos—one with a marginally lower risk of heart disease, another with slightly higher predicted cognitive ability, another with a less favorable profile for mental health—the moral landscape shifts. No one is forced to choose the top-ranked embryo, but the structure of the choice exerts its own pressure. If one option is labeled "best," the others become, by implication, "worse." Some possible children are framed as almost irresponsible to choose.

The language of "best" hides a normative template. Best relative to what? To which model of health, productivity, and social value? A polygenic score does not exist in a vacuum; it is trained on historical data that encodes past inequalities, cultural biases, and environmental conditions. When that score is then used to sort embryos, the system quietly steers reproduction toward the continuation—and in some cases intensification—of those embedded patterns.

At that point, the subway ad is no longer just selling medical information. It is selling a way of thinking about human beings: as bundles of probabilistic traits that can be evaluated, ranked, and discarded before they ever draw breath.

1.3 Remembering what "eugenics" meant in the twentieth century

Because "eugenics" is a word weighed down by horror, it is tempting either to deploy it sloppily as an all-purpose insult or to avoid it entirely. Both responses are mistakes. To see what is genuinely new about market-based embryo selection, we have to be precise about what eugenics was.

Twentieth-century eugenics combined three elements. First, it asserted that some human lineages were biologically superior and others inferior, with inferiority often racialized or tied to disability and poverty. Second, it claimed that the state had both the right and the duty to manage reproduction in light of this hierarchy, through sterilization, marriage laws, segregation, or worse. Third, it supplied a technocratic veneer: charts of hereditary "defect," intelligence tests, psychiatric diagnoses, and public-health rhetoric that made discrimination and violence feel like rational policy.

At its most extreme in Nazi Germany, eugenics moved from bureaucratic cruelty into industrial killing: forced sterilization, the murder of disabled children and adults, and ultimately genocide. But versions of eugenic ideology persisted elsewhere long after the swastika fell, embedded in population-control programs, migration policy, and lingering stereotypes about who should and should not reproduce.

To call something "eugenic" today is not to say "this is Auschwitz," but to recognize continuities in the underlying structure: assigning differential value to human lives based on predicted biological traits and then using social, legal, or technological means to shape who is born.

1.4 A logostic roadmap: q(t), tau(t), and why this argument matters now

The language of q(t) and tau(t) offers one way to name what is happening at a deeper level. Let q(t) be the evolving state of a community or civilization: its fears, incentives, institutions, and technologies at a given time t. Let tau(t) be the living manifold of truth and right order: not a static rulebook, but a dynamic shape of reality toward which human systems ought to bend.

In this framing, polygenic embryo selection appears as a specific curvature of q(t). It is a move by which a technologically powerful, anxious society tries to reduce uncertainty about the future by acting earlier and earlier in the life course—shifting decisions from schooling and environment back to gametes and embryos. It is an optimization maneuver: minimize predicted risk, maximize predicted advantage, using whatever data can be extracted from DNA.

But tau(t), if it includes anything like the Christian Beatitudes or a robust doctrine of human dignity, does not rank the worth of persons by their expected performance or their resistance to disease. It treats each child as a gift, not a project; as an image-bearer, not a product of parental portfolio management. From that perspective, the turn toward embryo ranking is not neutral innovation; it is curvature away from tau(t) under the pressure of fear and competition.

This argument matters now because the tools of market eugenics are arriving before most people have language to describe them. The advertising budget is large; the moral vocabulary is thin. If we do not learn to see polygenic embryo selection as the latest expression of a very old temptation, we will drift into its logic by default—one subway ad, one "responsible" choice, one discarded embryo at a time.

2. Making Designer Babies Look Normal: Nucleus Genomics as Case Study

2.1 The business model: IVF, embryo biopsy, and polygenic dashboards

The core of the enterprise is not a mysterious new form of gene editing. It is a recombination of existing procedures into a single consumer-facing pipeline. First, there is conventional in vitro fertilization. Eggs are retrieved from the woman's ovaries, fertilized in a lab dish, and allowed to develop to the blastocyst stage. This routinely produces multiple embryos from a single cycle, which fertility clinics already grade visually for morphology and development rate.

Next comes embryo biopsy. A few cells are taken from each embryo's outer layer, the trophectoderm, in a procedure that does not directly touch the cell mass destined to become the fetus. For years this biopsy has been used to detect large chromosomal abnormalities or single-gene disorders. Nucleus-style platforms extend the same sample into broad genomic profiling: the tiny fragment of tissue yields enough DNA to reconstruct most of the embryo's genome.

Once the genomic data exist, the business shifts from wet biology to data science and user interface. A contracted lab generates variant calls and polygenic scores across hundreds of conditions and traits. The company then acts as an interpretive broker: ingesting the raw numbers, applying proprietary models, and packaging the results for clients. The product is not just a report, but a dashboard that displays relative risks and predicted trait values for each embryo and, crucially, ranks them.

The final step links this digital sorting back to a clinical decision. The fertility doctor discusses the report with the parents, and one embryo is chosen for transfer. From the viewpoint of the clinic, this is simply another data input to an already complex choice. From the viewpoint of the company, the value lies in having inserted its scoring system at the very moment when a

potential human life is selected or discarded. What used to be a combination of medical judgment and chance now becomes, at least in part, an exercise in optimizing against a ranked genetic leaderboard.

2.2 What the $9,999 package buys: traits, IQ, and “best” embryos

The headline price signals that this is no longer a niche add-on for rare diseases; it is meant to be an aspirational consumer purchase. The more expensive package does not stop at monogenic disorders or obvious chromosomal anomalies. It bundles together risk estimates for common conditions, predictions for physical traits, and scores that purport to correlate with cognitive ability.

In practice, the report might display for each embryo a set of colored bars: lifetime risk of type 2 diabetes relative to a baseline; predicted adult height; probability distribution for body mass index; relative risk for major depression or bipolar disorder; and a polygenic index correlated with performance on standardized tests. Each embryo becomes a vector of numbers, and the software highlights those that score more favorably across a chosen basket of metrics.

What the parents are buying, then, is not certainty but a statistical tilt. They are paying for the ability to say, for example, that embryo three appears to have slightly lower predicted risk of heart disease and slightly higher predicted cognitive ability than embryo one. Even when the underlying models are modest in their predictive power, the presentation of a ranked list generates a powerful psychological effect. Faced with embryos labeled “higher risk” and “lower risk,” many people will feel drawn toward the latter, even if the numerical differences are small and the confidence intervals broad.

The presence of intelligence-related scores is especially telling. It shifts the frame decisively from avoiding suffering to enhancing advantage. A test that screens out a devastating childhood disease can be defended in terms of mercy. A test that nudges parents toward an embryo with a marginally higher expected test score in adulthood belongs to a different moral category. It turns the future child into a potential instrument of parental aspiration and social mobility, optimized in advance along the dimensions that the market has chosen to quantify.

2.3 Advertising the baby as upgrade: language, imagery, and aspiration

The public presentation of this service is not clinical or sober; it is aspirational, almost lifestyle-oriented. Posters, billboards, and online campaigns lean heavily on the language of “best,” “optimize,” and “take control.” The imagery often resembles that of fitness or wellness brands: soft colors, glowing infants, reassuring fonts, and subtle cues of success and serenity.

The framing is carefully individualized. Instead of talking about population-level improvements or the health of the nation, the ads speak to the private dreams and fears of a single couple.

Phrases evoke being a “better parent,” “doing everything you can,” or “giving your child every advantage.” The decision to engage with polygenic embryo selection is presented as a personal act of love and responsibility, not as participation in any broader project of shaping the gene pool.

At the same time, the visual and verbal cues encode a particular vision of the desirable child. The implied “best baby” is healthy, cognitively gifted, emotionally stable, and physically attractive by current cultural standards. The ad does not show short, anxious, chronically ill adults saying, “I am glad I exist despite my risks.” It shows glowing infants and confident parents whose future, we are invited to imagine, will go more smoothly because they chose correctly at the embryo stage.

In this way, advertising performs the same function that propaganda did in earlier eugenic regimes, but with different symbols. Where older posters extolled the fit, blond family and warned of the burden of the “unfit,” the new campaigns speak the language of empowerment and compassion. The underlying message is similar: some possible children are more desirable than others, and responsible adults will align their choices with that hierarchy.

2.4 Voluntary, individualized, data-driven—and still structurally eugenic

Defenders of these services are quick to point out the differences between their work and twentieth-century eugenics. No one is compelled to undergo IVF. No law obliges parents to test their embryos, still less to choose the top-ranked one. There are no forced sterilizations, no marriage bans, no camps. Everything happens within the framework of consent, contract, and private medical care.

Yet voluntariness at the level of individual transactions does not erase the structural logic. Once embryo ranking becomes technically available and socially normalized, it exerts pressure on all who can afford it. Parents may fear that by refusing to “optimize” they are handicapping their future children in a competitive world. Insurers and health systems may eventually view certain selections as negligent if they knowingly implant embryos with higher predicted risk of costly diseases. Professional societies may quietly shift their standards of best practice. The net result can be a form of soft coercion: no law forces anyone, but the cost of refusal rises.

Moreover, the system is data-driven not only in the sense that it uses genomic statistics, but also in the sense that it feeds on its own outcomes. Every child born following embryo selection becomes a future data point. Their health, educational attainment, and psychiatric history can refine the models for the next generation of clients. The more the system grows, the more it learns to discriminate between embryos along lines that track social advantage and disadvantage as well as biological risk.

Structurally, this resembles eugenics because it changes the composition of the next generation along lines judged desirable by a powerful subset of society. It is not the state that defines desirability, but wealthy clinics, venture-backed founders, and the upper-middle-class parents who can pay the fees. The targets may be disease risks and test scores rather than overt racial categories, but in a world where trait distributions correlate with ancestry and class, the effect is not neutral.

Calling this "market eugenics" is not a rhetorical flourish. It is a recognition that the core pattern—using reproductive technology to shape who is born according to an implicit hierarchy of worth—has re-emerged in a form that is financially motivated, heavily branded, and plausibly deniable. It is eugenics without swastikas, administered not by uniformed officials but by platforms, clinicians, and anxious parents convinced that they are simply doing the best they can.

3. Defining Eugenics: From Nazi Biopolitics to Contemporary Genetics

3.1 Core components of Nazi eugenics: hierarchy, coercion, and killing

To understand why contemporary genetic technologies trigger the word "eugenics," it is necessary to be precise about what eugenics meant at its most infamous peak. In Nazi Germany, eugenics was not an abstract idea or a set of optional medical procedures; it was a fully integrated state project that fused ideology, bureaucracy, and violence.

At its core were three components. First, there was a rigid hierarchy of human worth. The Nazi racial worldview sorted populations into "higher" and "lower" types, with so-called Aryans at the apex and Jews, Roma, and others at the bottom, along with people labeled "feebleminded," "degenerate," or "asocial." This hierarchy was presented as scientific fact, supported by pseudo-genetic arguments and crude anthropological measurements.

Second, there was coercion. The state claimed not only the right but the obligation to regulate reproduction. This took the form of forced sterilizations, marriage restrictions, and the removal of children from families deemed unfit. Individuals could not meaningfully refuse; their bodies and lineages were subordinated to the imagined health of the Volk.

Third, the project culminated in killing. What began as coerced surgeries and institutionalization escalated into the systematic murder of disabled children and adults in the so-called euthanasia programs, and ultimately into the industrialized extermination of entire populations. The boundary between "unfit" and "enemy" blurred, and biological language was used to justify mass murder as a kind of hygienic cleansing.

The combination of hierarchical ranking, coercive control over reproduction, and lethal violence is what makes Nazi eugenics uniquely horrifying. Any comparison to contemporary practices must respect the gravity of that history and distinguish clearly between resemblance and equivalence.

3.2 “Life unworthy of life” and the medicalization of violence

One of the most chilling phrases to emerge from that era is “life unworthy of life.” It encapsulates a shift from seeing human beings as bearers of intrinsic dignity to seeing them as biological burdens whose existence can be weighed against the welfare of the collective. Once a life is deemed unworthy, almost any intervention against it can be framed as rational and even compassionate.

Crucially, this judgment was not made only by political leaders or soldiers. Doctors, nurses, psychiatrists, and genetic counselors played central roles. Medical and psychiatric institutions classified individuals, maintained registries of “defect,” and implemented sterilization and killing programs. Forms were signed, diagnoses written, and procedures carried out in clinical settings. Violence was laundered through the language of pathology and treatment.

This medicalization is important for understanding how eugenics reappears in softer forms. When professionals are trained to think of certain traits as intolerable burdens and certain lives as excessive costs to the system, it becomes easier to speak of preventing such lives in the name of compassion. The line between relieving suffering and preventing the existence of people who might suffer is thin. It is at this junction that eugenic logic often re-enters the conversation under the guise of public health, economic prudence, or kindness.

The lesson is not that all medicine is suspect, but that any framework which teaches practitioners to rank lives by predicted cost or value is vulnerable. When that ranking is coupled to tools that can influence who is born, the risk of sliding toward a new version of “life unworthy of life” is real, even if the uniforms and slogans have changed.

3.3 Postwar eugenics: sterilization programs, population control, and amnesia

After the defeat of Nazi Germany, overt talk of racial hygiene became morally radioactive. The word “eugenics” fell out of polite discourse in many places, and some organizations rebranded or dissolved. Yet the underlying habits of thought did not vanish overnight. Instead, they migrated into new domains and were often cloaked in different language.

In several countries, forced or coerced sterilization programs persisted or expanded well into the postwar era. Targets included people with disabilities, indigenous communities, racial minorities, and those living in poverty. Official justifications shifted from explicit racial purity to concerns about social welfare, mental health, or the prevention of child abuse, but the structure

remained: certain groups were deemed less fit to reproduce, and the state intervened to stop them.

At the global level, population-control campaigns framed high birth rates in the Global South as threats to development and stability. Incentives, pressure, and sometimes coercion were used to steer reproductive choices among poor and marginalized populations, while wealthier groups were rarely subjected to the same scrutiny. Once again, the rhetoric emphasized progress and modernization, while the practice often involved deciding which lives were desirable in aggregate.

Simultaneously, the scientific study of human difference continued under new labels. Human genetics, behavioral genetics, and psychometrics often pursued questions very close to those that animated earlier eugenic research, but with more sophisticated methods and less inflammatory language. Over time, a kind of amnesia set in. Many institutions forgot, or did not wish to remember, how their own histories were entangled with eugenic projects. This forgetting allowed a new generation to approach similar questions with less historical caution than might have been warranted.

The postwar period thus did not eliminate eugenic patterns; it redistributed them into less visible channels. Understanding contemporary practices requires tracing those continuities as well as the undeniable changes in law, norms, and technology.

3.4 Conceptual criteria for calling something eugenic in the present

If the word “eugenics” is to retain any analytic value rather than becoming a mere insult, it needs reasonably clear criteria. Contemporary practices are not identical to Nazi policies, and it would be both inaccurate and disrespectful to treat them as such. At the same time, some practices clearly rhyme with the older patterns and deserve to be named accordingly.

At a minimum, a practice can be called eugenic in structure if it meets three conditions. First, it involves ranking or classifying human beings or potential human beings according to predicted biological traits, especially traits linked to health, cognition, or behavior. Second, it uses that ranking to influence patterns of reproduction or gestation in a systematic way, whether through direct intervention, economic pressure, or powerful social norms. Third, it operates within a framework that implicitly or explicitly treats some genomes as more desirable than others and acts to increase their prevalence.

Within this framework, there are degrees and variants. Coercive state programs that force sterilization or prohibit certain marriages represent a hard eugenics. Insurance policies that strongly incentivize prenatal testing and selective abortion for certain conditions represent a softer, but still directional, eugenics. Market offerings that rank embryos by polygenic scores

and encourage selection of the “best” ones fall into another category: decentralized, voluntary, but nonetheless oriented toward reshaping the gene pool along preferred lines.

Two further distinctions are helpful. One is the difference between efforts aimed narrowly at preventing severe, clearly defined diseases and efforts aimed broadly at enhancing traits like intelligence, temperament, or attractiveness. The former can be debated within a frame of mercy and suffering, though they are not free of eugenic risk. The latter more obviously map onto social hierarchies and ideals of performance, and therefore move more squarely into eugenic territory.

The other distinction is between individual motives and systemic outcomes. A parent may act out of love for a future child, a doctor out of concern for health, a startup founder out of enthusiasm for innovation. Yet when these actions aggregate to produce a shift in who is born, according to criteria of genetic desirability, the system as a whole can be eugenic even if no one actor has genocidal intent. Intent matters for moral judgment, but structure matters for naming patterns.

By these criteria, polygenic embryo selection for traits and IQ is eugenic in its architecture. It takes embryonic humans, scores and ranks them by predicted genomic qualities, and steers reproduction toward those at the top of the list. It does so under conditions of choice and contract rather than state violence, but the underlying logic—shaping the next generation’s genetic composition to fit a preferred template—is continuous with the history that made the word “eugenics” necessary in the first place.

4. Polygenic Scores, Uncertain Science, and the Illusion of Control

4.1 What polygenic risk scores can and cannot do

Polygenic risk scores start from a simple mathematical idea. For a given trait or disease, genome-wide association studies estimate how much each common genetic variant nudges the trait up or down. A polygenic score then adds those tiny nudges together across the genome, weighting each variant by its estimated effect. The result is a single number that is supposed to summarize an individual’s genetic tilt toward higher or lower risk, or toward a higher or lower trait value.

In populations that resemble the original study sample, these scores can sometimes sort people into broad risk categories. Someone in the highest few percent of the score distribution for heart disease may indeed face a noticeably higher probability of a future cardiac event than someone in the middle. For certain traits with relatively simple genetic architectures and very large datasets, polygenic scores can outperform older, cruder risk factors.

But there are hard limits. Polygenic scores are statistical tools, not destiny meters. They reflect correlations in specific historical populations, under particular environmental conditions, using noisy phenotypes and imperfect genetic models. Their predictive value often drops sharply when applied to people whose ancestry, diet, or life circumstances differ from those of the original study cohorts. They cannot foresee accidents, infections, social upheavals, or the effects of future medicine. They do not see the unmeasured environmental factors that may dwarf genetic contributions for many outcomes.

At best, a polygenic score can say, “In a population like the one we studied, people with scores like this tended, on average, to have outcomes like that.” Turning this into a confident statement about a particular embryo decades into an unknown future requires several leaps that the underlying science does not justify.

4.2 IQ, height, and complex traits: variance explained versus hype

The mismatch between scientific nuance and marketing hype becomes especially stark for traits like height and intelligence. Height is often held up as a success story: a trait with high heritability and a relatively straightforward biology. With enormous datasets, polygenic scores for height now explain a substantial fraction of the variation in some European-ancestry populations. Even here, though, “substantial” means a partial story. Genes can tilt the odds toward being taller or shorter, but childhood nutrition, illness, and other factors still matter, and individual predictions remain probabilistic.

For cognitive ability, the situation is more fragile. Intelligence tests are noisy, culturally loaded measures; the genetics is more complex; and the environment plays a large role. Polygenic scores for educational attainment or IQ explain a real but significantly smaller fraction of the variance even in the best-studied groups. Between two people with very different scores, the higher-scoring one is more likely, on average, to perform better in certain academic environments. But many individuals with middling or low scores outperform those with higher ones, and the scores themselves encode historical inequalities in schooling, nutrition, and social opportunity.

Despite these limitations, embryo-selection marketing often treats trait scores as if they were strong levers. A small difference in expected height or cognitive index between embryos is presented as meaningful. The statistical language of variance explained, confidence intervals, and effect sizes fades into the background. What remains on the screen is a simple impression: embryo three has “higher IQ” and “lower risk” than embryo one. The fact that the underlying predictive power may be modest, and heavily context-dependent, rarely appears with equal visual force.

This gap between variance explained in a research paper and perceived certainty in a parental decision is one of the central dangers of polygenic embryo selection. Hype stretches partial signal into apparent control, and once parents see a ranking, it becomes psychologically difficult to treat it as merely one small, uncertain piece of information among many.

4.3 Trade-offs, pleiotropy, and the unknown costs of optimization

Another problem lies in the way genes refuse to respect human categories. Many variants influence multiple traits at once, a phenomenon known as pleiotropy. A change that slightly reduces the statistical risk of one condition may slightly increase the risk of another; a variant associated with higher educational attainment could also be associated with a greater chance of certain mood disorders. The genome is a web of overlapping influences, not a set of clean, independent sliders.

Polygenic embryo selection operates in this tangled space with incomplete maps. Companies may optimize for a basket of traits that they can score, but they cannot fully account for the countless correlated traits that are unmeasured or poorly understood. Selecting an embryo with a slightly "better" profile for the advertised metrics may unintentionally tilt the future child toward vulnerabilities that are not yet part of any dashboard.

There is also a risk of narrowing the human repertoire in ways we cannot foresee. Genetic variation that looks like disadvantage under present conditions may turn out to confer resilience or creativity under different circumstances. A temperament more prone to anxiety may also be more attuned to danger or more empathetic. A brain wired outside the statistical norm may struggle in standardized classrooms yet excel in domains that the tests do not measure. To optimize against current preferences is, in effect, to bet that the future will value exactly what the present values, and that the hidden trade-offs will never be regretted.

From a logostic perspective, this is an attempt to move q(t) closer to a local, human-defined optimum while ignoring the broader shape of tau(t). It treats the trait-profile currently rewarded by a particular economic and cultural regime as if it were the true summit of human flourishing. The unknown costs—lost forms of character, dampened forms of insight, erased ways of being—are not visible in the charts, but they may be real.

4.4 How statistical uncertainty disappears in parental anxiety and marketing

Even when companies acknowledge uncertainty in their fine print, statistical caveats rarely survive contact with the emotional reality of reproduction. Prospective parents sitting in a clinic are not detached consumers of probability distributions; they are people who may have endured infertility, miscarriage, or the birth of a child with serious illness. They are often exhausted, hopeful, and afraid. In that state, numbers that promise any degree of control can be intoxicating.

Psychologically, several biases converge. There is loss aversion: the fear of later regret if one "passes up" an embryo that was labeled lower risk. There is base-rate neglect: parents may focus on relative differences in risk between embryos and ignore the fact that absolute risks remain low or that the models are weak. There is the tendency to treat color-coded visuals and rankings as more authoritative than text disclaimers. A green bar looks safe, a red bar dangerous, even if the underlying statistics are ambiguous.

Marketing strategies exploit, and sometimes mirror, these biases. They simplify complex science into taglines about "stacking the odds" or "doing everything you can." They present dashboards that emphasize comparative differences while relegating confidence intervals and methodological limitations to dense reports or separate documents. The entire experience is designed to make the client feel empowered, informed, and responsible.

The combination of anxious parents and carefully crafted interfaces creates an illusion of control. People who would never claim to guarantee a child's future nonetheless feel they have passed a moral threshold: they have chosen the "best" embryo according to the tools available. If the child later struggles, the pain will be filtered through that earlier choice. If the child thrives, the technology may receive more credit than it deserves. In both cases, the deeper truth remains that life cannot be fully tamed by statistics.

This is where the ethical problem sharpens. Polygenic scores, honestly represented, could be one modest input into a broader, humble discernment about risk and love. In the current configuration, they are often presented and perceived as powerful levers over destiny. The scientific uncertainties and unknown trade-offs are real, but they fade behind a brightly lit promise: that the chaos of human birth can be rendered more predictable by a few thousand dollars and a ranked list of embryos.

5. From State Eugenics to Venture Eugenics: Capital, Thiel, and Techno-Elites

5.1 The shift from state monopoly to platform capitalism

Classical eugenics placed the state at the center of reproductive control. Ministries of health, interior, and justice determined who could marry, who would be sterilized, where people would be confined, and, in the worst cases, who would be killed. The apparatus of coercion was bureaucratic and visible: laws, decrees, institutional forms, uniforms. It was possible to point to a specific regime and say, there, that is where the decisions are being made.

In the emerging system around polygenic embryo selection, authority is distributed differently. States still regulate fertility clinics, but the decisive innovation comes from private companies that sit at the intersection of biotech and software. These firms do not command anyone to

reproduce or refrain from reproducing. Instead, they create tools, platforms, and business models that make certain choices newly available and newly salient. They are not ministries; they are vendors.

Platform capitalism is well suited to this kind of quiet influence. A platform connects users, data, and services in a way that scales easily once the core infrastructure is built. In the case of polygenic embryo selection, the platform connects IVF clinics, genomic laboratories, machine-learning models, and anxious parents. The more people use it, the more data it gathers, and the more persuasive its scores may seem. It does not need to issue decrees; it only needs to become normal.

This shift from state monopoly to platform capitalism changes the tone but not the underlying possibility. A government that tried to impose a eugenic reproductive policy today would face immediate international condemnation. A network of startups that achieve similar directional effects through voluntary transactions and aspirational advertising is more likely to be seen as innovative, even benevolent. The danger is less dramatic but more insidious: instead of a single visible hand directing the gene pool, a swarm of market actors pushes in similar directions under the banner of choice.

5.2 Peter Thiel, mining under apartheid, and the global trajectory of power

Peter Thiel's trajectory illustrates how older regimes of extraction and hierarchy can feed into new ones. Born in Germany and raised partly in South Africa and what was then South West Africa, he spent formative years in societies structured by apartheid. His father worked in mining, including in uranium operations, in regions where racial segregation and resource extraction were tightly intertwined. As a child, he inhabited a world in which some people's lives and labor counted far more than others, and where the land itself was treated as a reservoir of wealth to be drawn down for distant investors.

Later, Thiel would become a central figure in Silicon Valley's own extraction regimes, co-founding financial platforms and surveillance companies and then investing in a wide range of frontier technologies. The materials being mined changed: instead of ore, data; instead of seams in the ground, seams in human behavior and social networks. But the pattern remained: locate a system that can be turned into numbers, build an infrastructure for monitoring and intervention, and then monetize the flows.

Now, through his venture firm, he is one of the early funders of companies that treat the human germline as a new frontier of optimization. Embryos become sites of extraction in a new sense: their genetic information is pulled out, scored, and used to steer selection. The value proposition is not uranium or user attention; it is the promise of "better" future humans according to the metrics that the platform defines.

It would be simplistic to claim a straight line from apartheid mining to embryo ranking, or to reduce any individual's motives to a single biographical thread. Yet the continuity in structures of power is striking. The same global class that once profited from the unequal distribution of land and labor now stands to profit from the unequal distribution of reproductive technologies. The tools are more sophisticated, the rhetoric more humane, but the underlying question is familiar: who gets to decide what counts as improvement, and who bears the risks.

5.3 Venture capital as quiet selector of which futures get built

Venture capital occupies a peculiar position in contemporary societies. It does not simply fund businesses; it curates possible worlds. A venture fund decides which ideas receive the resources to scale and which remain prototypes or thought experiments. In doing so, it shapes not only markets but the technological and social environments in which future children will grow up.

When a venture firm backs polygenic embryo selection, it is making more than a bet on a specific founder. It is endorsing a particular vision of human reproduction: that embryo-level optimization will be part of normal family planning for those who can afford it. Capital flows are not neutral; they signal to regulators, competitors, and the wider culture that this is a domain where innovation is desirable and where moral hesitation should not block progress.

Because venture decisions are private, they escape the kinds of democratic scrutiny that state programs sometimes face. There is no parliamentary debate about whether society wants designer embryo dashboards; there is a term sheet. There is no public referendum about whether children should be ranked by predicted IQ; there is a pitch deck that promises returns. By the time the public encounters the technology, it often arrives as a polished service, backed by impressive investors and framed as the natural next step.

In this way, venture capital becomes a quiet eugenic selector. It does not directly choose which embryos are implanted, but it chooses which tools and narratives will be available when parents make those choices. It funds the infrastructure that makes some futures easier to imagine and others harder. A world in which billions of dollars flow into embryo ranking will look very different from one in which those funds went instead into universal prenatal care, accessible mental-health support, or schools that welcome a wider range of human minds.

5.4 Market pressure as soft coercion: when "choice" becomes expectation

Defenders of polygenic embryo selection often lean heavily on the language of choice. No one is forced to use these services, they argue; they are simply giving parents more options. In a narrow sense, this is true. But in a market society, options rarely remain neutral. They generate norms. Over time, what begins as an opportunity can become an expectation, and the refusal to use a widely available tool can be framed as negligence.

Imagine a near future in which embryo ranking is common among affluent couples. Schools, workplaces, and neighborhoods begin to fill with children whose parents have paid to minimize certain risks and maximize certain traits. If a serious condition appears in a child whose parents declined testing, social judgment may follow: why did they not do everything they could? Insurers may quietly adjust their models, offering better terms to families who can prove that they selected lower-risk embryos. Clinics may introduce subtle default settings that privilege "optimal" profiles. In such an environment, saying no requires moral courage and, often, social and financial capital.

Soft coercion operates through fear of regret as well. Parents know that their child's life will contain suffering; they do not know where or when. Presented with a table showing relative risks, many will worry that choosing an embryo with a higher predicted risk of a given disease might one day feel like a culpable act if that disease materializes. The statistical limitations of the scores matter less than the imagined future scene of a hospital bed or a difficult diagnosis. Against that imagined pain, the cost and uncertainty of the technology fade.

From a logostic perspective, this is how an anxious q(t) pulls the system away from tau(t) without ever issuing a command. The structure of incentives, fears, and norms converges on the same functional outcome as more overt eugenic regimes: fewer children with certain profiles are allowed to exist. The difference is that the decision is fractured into countless individual choices, each framed as love and responsibility. It becomes harder to see the pattern and harder to resist it.

At that point, calling the practice "voluntary" is technically accurate but morally incomplete. The presence of formal consent does not absolve a system when the alternatives are loaded with penalties. Market eugenics thrives in this gray zone, where no one is forced, everyone is afraid, and the platforms that profit from the fear can point to free choice as their shield.

6. Genealogy, Resistance, and the Fritz Thiel Problem

6.1 Who Fritz Thiel actually was: precision engineer and Red Orchestra martyr

Long before embryo dashboards and venture funds, there was another Thiel whose life intersected the machinery of the German state in a very different way. Fritz Thiel was a precision engineer in Berlin and a member of the resistance network that the Nazi security services later labeled the Red Orchestra. He and his wife joined others in an audacious and, in hindsight, almost unbearably fragile act of dissent. While Nazi propaganda trumpeted an exhibition called "The Soviet Paradise," designed to portray the East as degenerate and justify the war of extermination, the group printed and glued small stickers over the posters with messages that mocked the regime and called the exhibition a lie.

The action was simple: words and glue against a vast apparatus of violence. The response was swift and brutal. The group was tracked, arrested, interrogated, and tried. Fritz was sentenced to death and executed in 1943, leaving behind a young child. His story is one of those that pierce the abstraction of "German society under Nazism," reminding us that even in the heart of the regime there were people willing to risk everything to say no.

To remember Fritz in this context is to recall that the history of eugenics and racial policy is not only a history of perpetrators and victims, but also of resisters who refused the logic of hierarchy and "life unworthy of life." His profession as an engineer and his execution as an enemy of the state form a stark counterpoint to the later image of technologists building systems that once again sort human beings by invisible metrics.

6.2 The temptation to anchor present critiques in heroic or villainous ancestry

When faced with contemporary figures who influence the shape of society, there is a powerful temptation to read their actions through the lens of ancestry. It is narratively satisfying to discover that a present-day billionaire is the grandson of a Nazi officer or of a famous resister. It offers a sense of moral symmetry: the sins or virtues of the fathers echoing in the sons, the arc of history bending ironically back on itself.

This temptation is especially strong when dealing with technologies that evoke Nazi-era themes. To connect a modern technocrat funding embryo selection with a martyr who died resisting Nazi propaganda feels like poetic justice or tragic inversion. It allows critics to say, in effect, that the descendant has betrayed the legacy of courage, or that the bloodline carries unresolved contradictions.

Yet genealogy is a blunt instrument for moral analysis. Ancestry can shape a person's early environment, but it does not determine their choices. Noble ancestors do not guarantee ethical descendants, and vicious ancestors do not doom their children to evil. To lean too heavily on family stories is to risk both inaccuracy and a kind of biological determinism that eerily resembles the reasoning we are trying to critique.

There is also the epistemic problem: family histories are often incomplete, contested, or simply private. Public speculation about who is related to whom can quickly outpace the available evidence, especially when internet rumor begins to fill in the gaps. Anchoring an argument to a genealogical claim that later proves false not only wrongs the individuals involved but also undermines the credibility of the ethical critique.

6.3 What we can and cannot say about Peter Thiel's grandparents

In the case of Peter Thiel, it is a matter of record that his parents were German, that his father was born in Germany before the end of the Second World War, and that the family later lived

and worked in apartheid-era southern Africa before emigrating to the United States. It is also a matter of record that there was a German engineer named Fritz Thiel who resisted Nazism and was executed for it. Between these two sets of facts, however, the publicly available evidence does not provide a firm genealogical bridge.

What can be said with confidence is limited. Peter Thiel's grandparents were Germans who lived through the Nazi period as adults. Like millions of others, they were situated somewhere in the vast spectrum between active complicity, quiet conformity, private doubt, and overt resistance. Without specific documentation, we do not know where on that spectrum they stood. We do not know whether they admired the regime, feared it, opposed it, or tried simply to survive. We do not know whether any of them were involved in acts of courage like those of Fritz, or in acts of cruelty, or in nothing more than the daily accommodations of life in a dictatorship.

What cannot responsibly be said is that a particular resister or perpetrator is definitively his grandparent without strong evidence. To assert, for example, that Fritz was Peter Thiel's grandfather because they share a surname and nationality not only exceeds the available data but also turns a flesh-and-blood martyr into a prop in a contemporary argument. The truth about Fritz does not need a genealogical link to any modern figure to remain powerful.

Recognizing these limits is part of the ethical discipline that should accompany any critique of market eugenics. The point is not to find a perfect personal story to shame or redeem a present-day actor. It is to understand how structures of power, extraction, and hierarchy persist across generations, regardless of the private virtues or vices of particular family lines.

6.4 Beyond bloodlines: how ideas and systems outlive the people who opposed them

If we step back from genealogy, a different and more sobering continuity comes into focus. The ideas and systems that underpinned Nazi eugenics did not vanish when individuals died, whether on the scaffold as resisters or in bed as party members. Concepts like biological hierarchy, trait-based worth, and population-level "improvement" have proven remarkably resilient. They slip out of discredited vocabularies, reappear in new scientific idioms, and adapt to the institutional forms of each era.

In this sense, the "Fritz Thiel problem" is not really about whether a particular engineer stands in someone's family tree. It is about the way in which a society can absorb both the witness of its martyrs and the ambitions of its technocrats and still drift toward familiar patterns. A man can die for pasting stickers that call Nazi propaganda a lie, and decades later companies can use far more sophisticated techniques to shape which lives are welcomed, without ever needing to invoke the old slogans.

Ideas outlive people. Systems outlive both their architects and their saboteurs. The current movement toward polygenic embryo selection is not the personal project of any one investor or

founder; it is the latest expression of a broader cultural tendency to treat human beings as optimizable objects. That tendency survived the downfall of Nazism, adapted to the language of postwar science and economics, and now finds a home in venture-backed platforms that promise “better babies.”

To focus exclusively on bloodlines is, in a way, to fall into the very trap that eugenics sets: to imagine that the key to understanding behavior lies in ancestry rather than in the living interplay of culture, incentives, and power. A logostic reading directs attention elsewhere. It asks how q(t) is shaped by institutions, technologies, and narratives, and how tau(t) might call a society back from repeating old mistakes in new forms.

In that light, the most important question is not whether a modern technologist descends from a heroic resister or a quiet functionary. It is whether, in the present, they are helping to build structures that recognize every child as a gift, or structures that quietly rank some possible lives above others. The answer to that question will matter far more than any entry on a family tree.

7. Holocaust Memory, Jewish Participation, and the Ironies of Market Eugenics

7.1 Jewish commuters passing “best baby” ads in a city of survivors

In New York City, the subway is not an abstract space. It is a moving corridor through neighborhoods where the twentieth century’s wounds are still very much alive. In some boroughs, older passengers bear tattooed numbers on their forearms or carry memories of parents who did. Their grandchildren walk the same platforms with headphones on and backpacks slung over shoulders, inheritors of stories about cattle cars, selection ramps, and the logic of racial hygiene taken to its murderous conclusion.

Against that backdrop, the “Have Your Best Baby” advertisement acquires a particular charge. It does not mention Jews, races, or purity. It speaks instead of risk scores, intelligence, and the promise of optimization. Yet anyone who has grown up with Holocaust memory will recognize the echo: the idea that some lives are preferable to others, and that clever people with charts and credentials can help society move toward the “better” ones. The visual contrast between a glossy embryo dashboard and archival photos of selection at the ramp is stark, but the underlying logic rhymes.

Jewish commuters pass beneath these posters as members of a people marked by that history. Some may feel nothing; their attention is elsewhere, the day demanding. Others may feel a faint unease they cannot immediately name. A few will consciously register the irony: a city that built museums and memorials to say “never again” now hosting public ads for a technology that quietly reintroduces selection based on probabilistic traits. The scene captures the dissonance

of a late-modern world that remembers atrocity in ritualized ways while experimenting with its logics in sanitized forms.

7.2 Jewish and Israeli-linked investors in polygenic embryo selection

The irony deepens when one looks not only at commuters but at cap tables. Among the early backers of polygenic embryo-selection startups are individuals and funds with Jewish heritage or strong connections to Israel. Some investors came of age in communities shaped by Holocaust narratives and the founding of a state conceived, in part, as a refuge from extermination. Others operate within global networks where "never again" is both a moral slogan and a political touchstone.

It would be a serious mistake to treat this as proof of collective hypocrisy. Jews are not a monolith; Jewishness does not confer immunity to the seductions of technological progress or the fears that drive reproductive decisions. In a high-pressure world where wealth, security, and status are precarious even for the successful, the promise of "better babies" can appeal as strongly to those whose families suffered under past eugenics as to anyone else. In some cases, it may appeal more strongly, precisely because the memory of being on the wrong side of a sorting motivates a fierce desire never to be that vulnerable again.

The presence of Jewish and Israeli-linked investors in this space thus reveals something sobering. The lesson some have drawn from history is not simply "never classify human beings by value," but also "never allow your own descendants to be classified as lesser." When embryo selection is framed as a way to ensure health, resilience, and competitive advantage for one's children, it can be interpreted as a defensive measure in a world perceived as permanently hostile. In that reading, participating in market eugenics becomes a way to armor the next generation, not to recreate the horrors of the past.

7.3 Trauma, safety, and the desire to be on the "right side" of the next sorting

Collective trauma reshapes how groups interpret risk. For a community that has experienced expulsion, ghettoization, and genocide, the world can appear as a place where safety is always provisional and where the next wave of hostility is a matter of when, not if. In such a mental universe, the primary ethical imperative is survival: protect the children, strengthen the community, ensure that no future tyrant can so easily target you again.

In this frame, technologies that promise stronger, smarter, more resilient offspring can be perceived as tools for survival. If your grandchildren will face an uncertain planet, perhaps with rising authoritarianism, technological upheaval, and ecological stress, why not give them every possible genetic advantage? The logic is not necessarily one of arrogance or desire to dominate; it can be one of fear and an internalized belief that vulnerability invites catastrophe.

The tragedy is that this mindset, understandable as it is, can lead trauma descendants to participate in systems that replicate the very structures that once threatened them. By investing in or using tools that rank embryos by desirable traits, they help normalize a world where being "on the right side" of genetic sorting matters even more. The old hierarchy of Aryan versus non-Aryan may be gone, but new hierarchies of polygenic advantage emerge, and those without access to or belief in such technologies risk being cast as irresponsible or inferior.

From a logostic perspective, this is a curvature of q(t) shaped by fear rather than by trust in tau(t). The desire to be safe in the next crisis is understandable, yet it can drive participation in architectures of value that treat some lives as more worth bringing into being than others. Trauma becomes a vector through which eugenic logics re-enter the world, this time under the auspices of self-protection.

7.4 Critiquing systems without ethnic blame: precision in language and judgment

Given these ironies, it is tempting for critics to speak in sweeping terms: "the Jews are funding eugenics," or "a people once targeted by racial science now promote a new version of it." Such formulations might feel cathartic, especially to those who are angry at Israeli policies or at particular high-profile Jewish technologists. But they collapse distinctions that are ethically essential. They turn complex, internally contested communities into caricatures and risk sliding into the very kind of essentializing that eugenics relies upon.

A more precise critique targets systems, roles, and decisions. One can say that specific funds, run by specific individuals, have chosen to allocate capital toward polygenic embryo selection, and that this choice contributes to the normalization of market eugenics. One can note that some of those individuals come from communities with strong Holocaust memory and that this makes the situation historically and morally poignant. One can analyze how communal trauma and contemporary geopolitics interact with technology and capital to produce these outcomes.

What one should not do is assign collective guilt or cast an entire people as uniquely responsible for a trend that spans continents and cultures. Christians, secular technocrats, East Asian elites, and many others are involved in similar projects. The drive to optimize children's traits is not owned by any one ethnicity; it is a feature of a globalized, competitive, technocratic civilization. To single out Jews as such is to misunderstand the scale of the problem and to risk replaying older patterns of scapegoating.

Precision in language is a form of moral discipline. It allows the critic to condemn market eugenics without reproducing antisemitic tropes. It keeps the focus on structures of incentive and power rather than on bloodlines. It recognizes that a Jewish investor in a polygenic startup and a Jewish commuter uneasy beneath a "best baby" ad may belong to the same people but occupy very different spiritual positions in relation to tau(t). In doing so, it opens space for

genuine solidarity: for those who remember the Holocaust as a warning to stand alongside those who see in market eugenics a new iteration of an old, deadly temptation.

8. A Logostic Reading: q_world(t), τ_child(t), and the Gift of the Person

8.1 q_world(t) as anxious optimization basin: fear of illness and failure

In logostic language, q_world(t) is the state of the world's mind at a given moment: its fears, incentives, expectations, and default assumptions about what matters. In the era of polygenic embryo selection, q_world(t) is shaped by a powerful basin of attraction: anxious optimization. Parents are told that life is a tournament, economies are unstable, healthcare is precarious, and the margin between thriving and disaster is thin. Within that basin, every possible lever to reduce risk or increase advantage becomes morally charged.

Fear of illness is one part of this curvature. Families know, sometimes from painful experience, what chronic disease or severe disability can mean in terms of suffering, cost, and strain. They live in systems where support is uneven and often inadequate. It is understandable, even compassionate, to want to spare a future child from conditions that can cause great pain. But when this desire is filtered through q_world(t), it easily slips from relieving suffering to controlling the very existence of people who might suffer.

Fear of failure is the other major vector. Children are imagined as future competitors in a harsh marketplace of schools, jobs, and status. Parents worry that if they do not secure every possible advantage now, their offspring will be left behind. Polygenic scores for cognitive and behavioral traits plug directly into this anxiety. They appear as one more tool in the arsenal of the responsible parent: alongside tutoring, extracurriculars, and nutrition, there is now genome-level selection.

Under these pressures, q_world(t) becomes an optimization engine that does not ask whether its target is worthy. It simply assumes that minimizing risk and maximizing predicted performance is the highest good available. Any technology that promises to move in that direction is welcomed, funded, and normalized. From within this basin, it becomes difficult even to formulate the question of whether some kinds of uncertainty, vulnerability, and difference are not defects to be eliminated but essential features of a world where persons, not products, come into being.

8.2 τ_child(t) as manifold of gift, dignity, and unpredictability

Against the curvature of q_world(t), tau_child(t) represents the manifold of truth about what a child is. It is not a static formula but a living shape of meaning that unfolds across time. In most

religious and humanistic traditions, this manifold includes three core elements: gift, dignity, and unpredictability.

The child as gift means that their existence is not fully accounted for by parental intention, genetic planning, or social utility. A child arrives as someone who could not have been fully anticipated, even if every polygenic score and ultrasound had been perfect. Their presence is, at some level, sheer givenness. This sense of gift is precisely what the language of optimization erodes. If a child is the outcome of careful selection within a ranked list, it is easy to slip into thinking of them as the result of a successful strategy rather than as a surprise entrusted to one's care.

The child as bearer of dignity means that their worth is not contingent on traits, performance, or the absence of disease. Dignity is not enhanced by higher predicted IQ nor diminished by higher predicted risk of depression. It is not a function of polygenic indices at all. Tau_child(t) therefore contains a deep contradiction with any system that encourages parents to think of some potential children as more worth bringing into existence than others because of their expected traits.

The child as unpredictable person means that their future cannot be compressed into genetic probabilities. They will make choices, form attachments, suffer, learn, and perhaps encounter grace in ways that no model can foresee. Their character will be shaped by relationships, experiences, and events far beyond the scope of a laboratory report. To honor this unpredictability is to accept that some aspects of their life must remain open, not optimized. It is to recognize that the most important things about them may be precisely those that were not planned.

Tau_child(t) thus stands as a manifold in which the right response to a new life is reverent welcome, not managerial control. The closer a culture's q_world(t) approaches this manifold, the less plausible embryo ranking appears. The more distant it becomes, the more children are treated as configurable outputs of a reproductive pipeline.

8.3 Leaderboards versus Beatitudes: whose criteria count as "success"?

The embryo dashboards and marketing materials of polygenic selection use an implicit metaphor: the leaderboard. Embryos are displayed as entries with scores; some rise to the top; others fall behind. The criteria for ranking are chosen by the platform and by the cultural moment: lower risk of certain diseases, higher expected educational attainment, favorable personality indices. Success is defined as being high on these lists.

This leaderboard logic is not confined to the lab. It mirrors broader social patterns: school rankings, college admissions, performance reviews, social-media metrics. In each domain, a narrow band of traits and achievements comes to stand for worth. The embryo leaderboard

merely pushes this logic upstream into the earliest stage of human existence. The danger is that once potential lives are introduced into this ranking system, the threshold between "good enough" and "not good enough" may gradually shift.

Set against this is another set of criteria for success, articulated in traditions that emphasize mercy, humility, and solidarity with the vulnerable. In the Christian vocabulary, the Beatitudes bless the poor in spirit, the mourners, the meek, the persecuted. They locate real greatness not in control, power, or measurable advantage, but in dependence on grace and in costly love. Under such criteria, a child who struggles, who is weak, or who does not fit the leaderboard template may be closer to the heart of what matters than the optimized achiever.

The tension is sharp. Leaderboards reward the traits that help individuals climb within existing systems. Beatitude-style criteria question the systems themselves and honor those who, by the leaderboard's standards, are failures. If q_world(t) defines success in terms of competitive advantage and reduced burden, polygenic embryo selection appears rational. If tau_child(t) defines success in terms of faithfulness, mercy, and the flourishing of the least, then deliberately screening out certain kinds of children looks like a failure to trust those deeper standards.

The question, then, is not simply whether polygenic scores are accurate, but whose metrics we are allowing to dictate the shape of future generations. Adopting embryo leaderboards as a normal part of reproduction is tantamount to declaring that the world's current, narrow definition of success has the right to reach all the way back into the womb.

8.4 Children as covenant, not project: resisting curvature toward productization

There is another way to understand what it means to bring a child into the world: covenant. A covenant is a binding commitment that precedes performance. It says, in effect, "I will be for you, regardless of what you become, because of who you are to me." When parents receive a child as covenantal gift, they are entering into a relationship that is not contingent on trait optimization or predicted outcomes. They promise to protect, nurture, and accompany a person whose path they do not control.

Treating children as projects is the opposite stance. A project has goals, milestones, and metrics. Its value is judged by outcomes: did it succeed according to the plan? When reproduction is framed as a project, embryo selection becomes an early phase of project management. Choosing the "best" embryo is like choosing the best candidate for a job: a rational act within a system oriented toward performance.

Resisting the curvature toward productization requires a deliberate recovery of covenantal thinking. Practically, this might mean refusing to use technologies that invite one to weigh and discard possible children based on genomic profiles. It might mean choosing to accept whatever

child comes, within the limits of ordinary reproductive prudence, as an act of faith that their life will have meaning beyond what can be optimized in advance. It might also mean building communities and institutions that support families raising children who do not match the leaderboard's metrics, so that covenantal reception does not happen in isolation.

Such resistance is not merely symbolic. It feeds back into q_world(t), creating small basins of attraction where different assumptions hold. In a congregation, neighborhood, or network where children are seen as covenants rather than projects, the social pressure to optimize weakens. Parents can grieve and struggle without feeling that they failed at a technical task. Children can grow without sensing that their right to exist was conditional on their performance.

From a logostic viewpoint, these pockets of covenantal reception are ways of aligning, however imperfectly, with tau_child(t). They assert that persons are not products, that unpredictability is not a defect, and that the worth of a human life cannot be read off a risk score. In a world sliding toward market eugenics, such assertions are not merely private preferences; they are acts of quiet resistance against a powerful, well-funded curvature that would like to turn even the beginning of life into an optimized deliverable.

9. Christian and Secular Bioethical Alternatives to Market Eugenics

9.1 Existing guidelines: disease prevention versus trait selection

Most existing professional guidelines in reproductive medicine try to draw a line between using genetics to prevent serious disease and using it to select for non-medical traits. Preimplantation testing for conditions that cause early death or profound suffering is often treated as permissible or even desirable. Selecting embryos because they are predicted to be taller, slimmer, or marginally more likely to excel academically is, on paper, discouraged.

The logic behind this distinction is straightforward. When the goal is to avoid a well-characterized, severe condition, the ethical frame can be one of mercy: trying to spare a child from experiences that medicine and lived testimony agree are extremely burdensome. When the goal shifts to enhancing traits that are mostly about advantage or preference, the frame changes to one of social engineering. The risk of reinforcing existing hierarchies and stigmatizing those who do not fit the preferred profile becomes much higher.

In practice, however, the line is porous. Some conditions exist on spectra that blur into normal variation; some "diseases" are disabling partly because societies are unwilling to accommodate difference. The same variant may be framed as a pathology in one context and as a valued trait in another. As polygenic scores enter the scene, even this fragile distinction is strained. A score

that bundles small effects across hundreds of variants does not divide neatly into “disease” and “non-disease”; it yields weighted probabilities for a wide range of outcomes.

Still, the existing guidelines offer a place to stand. They affirm, at least in principle, that using technology to eradicate whole categories of people defined by non-medical traits is ethically suspect. Any alternative to market eugenics will need to refine and deepen this distinction, rather than abandon it. The task is not only technical but moral: to decide which uses of genetic knowledge genuinely honor compassion and which cross into ranking human worth.

9.2 Advertising limits, informed consent, and truthfulness about uncertainty

A second line of response focuses on how these technologies are presented and chosen. Even if polygenic embryo selection remains legally available, its ethical impact depends heavily on advertising practices, consent procedures, and the honesty with which uncertainty is communicated.

One obvious measure is to regulate reproductive advertising with at least as much care as financial or pharmaceutical advertising. Claims about “best babies” and “genetic optimization” could be restricted or prohibited. Visuals that imply control over complex traits like intelligence or temperament could be treated as misleading. Marketing text could be required to include clear, prominent explanations of what the scores do not predict, not just what they might correlate with.

Informed consent, too, must become more than a signed form in a stack of paperwork. Clinics and companies could be required to provide counseling that explains, in plain language, the probabilistic nature of polygenic scores, their population-specific limitations, and their unknown trade-offs. Prospective parents should have space to ask, for example, whether a small difference in predicted risk truly justifies discarding embryos, or whether the hoped-for gains in predicted cognition are supported by robust evidence.

Truthfulness about uncertainty is not merely a technical nicety; it is a moral obligation. When people are making irreversible decisions about possible lives, any exaggeration of control, any downplaying of ignorance, becomes a form of manipulation. A secular bioethic worth the name must insist that companies profit, if they profit at all, from realistic portrayals of what their tools can and cannot do. Illusions of power over destiny are themselves harmful, regardless of how the genes fall.

9.3 Churches, synagogues, and mosques as communities of refusal and care

Religious communities have a particular role to play because they hold alternative stories about what children are and what life is for. In many traditions, a child is seen as an image-bearer of

God, a trust, or a gift, not as a product of parental design. These narratives can provide both the motivation and the social support needed to resist the pressure to optimize.

Communities of faith can serve as places where refusal is honored rather than shamed. Parents who decide not to use embryo-ranking services, or who welcome children with known risks or disabilities, may need material, emotional, and spiritual backing. Congregations can organize practical help, celebrate the presence of those who do not fit the world's ideals of perfection, and teach that weakness and dependence are not moral failures but part of the human condition.

At the same time, religious leaders must grapple honestly with their own histories. Many churches, synagogues, and mosques have, at various points, endorsed or tolerated eugenic thinking, racism, or contempt for the disabled. To speak credibly against market eugenics now, they will need to confess those complicities and articulate a clearer theology of the body, of suffering, and of the limits of human control.

When they do, they can offer something that secular regulation cannot: a thick account of meaning that makes it psychologically plausible to accept unoptimized children. If parents believe that their child's ultimate value lies not in measurable traits but in a relationship with God and with a community that will not abandon them, the lure of polygenic selection weakens. Religious communities can thus become small laboratories of a different q(t), where tau_child(t) is given more weight than the leaderboard.

9.4 A minimal ethic: never ranking a life's worth by its predicted genome

Even outside explicit religious frameworks, it is possible to articulate a minimal ethic that offers a clear boundary. One such principle might be stated simply: never rank the worth of a life by its predicted genome. This does not forbid all use of genetic information. It does forbid crossing a crucial line: treating some possible persons as less deserving of existence because their DNA suggests they will be less healthy, less intelligent, or less convenient.

Translated into practice, this ethic would allow genetic screening aimed at informing care, preparing families, or preventing conditions that are incompatible with any meaningful life, while drawing a sharp line against using polygenic scores to sort embryos into "acceptable" and "unacceptable" categories based on traits tied to social advantage. It would challenge any language that suggests certain children are "burdens" whose non-existence is preferable, not just for their sake but for the sake of parents or society.

This minimal ethic also has implications for law and policy. It suggests that publicly funded health systems should prioritize support for people with disabilities and chronic illnesses, rather than spending disproportionate resources on technologies that prevent their existence. It suggests that insurance schemes should not penalize parents for refusing trait-based selection.

It suggests that research on polygenic scores should be channeled toward understanding and treating disease in those who are born, not toward refining algorithms for discarding those who are not.

At its heart, the principle insists on a simple, stubborn truth: a person is not reducible to their genome, and the right to exist is not contingent on statistical predictions. In a world where market eugenics presents itself as responsible parenting, this truth may be easy to affirm in theory and hard to live in practice. Yet any serious alternative to the new eugenics will have to begin here, with a refusal to let predictive genomics decide which lives are welcome.

10. Conclusion: Resisting Market Eugenics Without Swastikas

10.1 What is genuinely new and what is depressingly familiar

Seen from a distance, polygenic embryo selection is both a technical novelty and a very old story. On the new side are the tools: genome-wide association studies, machine learning, and dashboards that turn microscopic bits of embryonic tissue into colorful risk charts. No previous generation could have looked at a blastocyst and seen, however dimly, a profile of future disease probabilities and predicted test scores. The fusion of IVF, high-throughput sequencing, and platform capitalism has created a form of reproductive decision-making that simply did not exist before.

On the familiar side are the underlying impulses and structures. The urge to rank human beings, to sort some lives into a “more desirable” category and others into a “less desirable” one, predates genetics. The twentieth century gave that urge a particularly lethal form under Nazi eugenics and its cousins, but the basic pattern remains recognizable: an anxious society, technocratic elites, and narratives that collapse dignity into predicted usefulness or burden. The modern twist is that this sorting happens earlier and more quietly, long before any child can speak.

The combination is what makes market eugenics so dangerous. The novelty of the tools can dazzle; the familiarity of the logic can lull. Because there are no uniforms or explicit racial laws, it is easy to assume that “this time is different” in a morally decisive way. It is different, but not decisive. The same temptation to treat some possible people as less worth bringing into existence has simply moved into a sleeker, more deniable format.

10.2 Naming market eugenics clearly without reckless accusations

If the logic is continuous in structure with past eugenics, it deserves to be named. Euphemisms like “genetic optimization” or “reproductive choice enhancement” obscure what is happening: the use of probabilistic genetic information to steer who is born along lines that track social

advantage. Calling this “market eugenics” is not rhetorical excess; it is a descriptive attempt to capture both the eugenic function and the market-based mechanism.

At the same time, precision matters. To say that a practice is eugenic in structure is not to say that its practitioners are Nazis or that they harbor genocidal intent. It is not to flatten the differences between embryo selection and death camps. Reckless accusations that collapse these distinctions do two harms at once: they wrong individuals by imputing motives that may not be present, and they blunt the force of the critique by making it easy to dismiss as hyperbole.

The task is therefore double. On one hand, we must resist the pressure to sanitize language out of politeness or fear of controversy. On the other, we must discipline our speech so that it targets systems, incentives, and logics rather than bloodlines or ethnic groups. Naming market eugenics clearly means tracing how platforms, capital, and cultural ideals combine to produce a directional effect on the gene pool, and doing so without surrendering to caricature.

In logostic terms, it means describing the curvature of q_world(t) with accuracy, so that any hoped-for movement toward tau(t) starts from truth rather than from slogans.

10.3 How to live and parent without joining the genetic arms race

For many people, the most pressing question is not theoretical but practical: how should one live and make reproductive decisions in a world where embryo leaderboards exist? It is easy to condemn market eugenics in the abstract; it is harder to face concrete fears about disease and failure when the tools are on offer.

One response is refusal: choosing not to use polygenic selection at all. This is simplest in communities that explicitly reject ranking embryos by predicted desirability and that offer moral and practical support to those who welcome whatever children they receive. Where such support is absent, refusal may still be possible, but it comes at a higher psychological cost. In those cases, individuals and couples may need to seek or build small circles of solidarity, formal or informal, where they can articulate and sustain their decision.

Another response is disciplined restraint. Some may decide that testing for a narrow range of severe, well-defined conditions is acceptable, while drawing a firm line against trait-based or polygenic ranking. This is a fragile compromise, easily eroded, but it can serve as an interim position for those who cannot yet imagine total refusal. What matters is that the line is conscious and argued for, not simply inherited from marketing categories.

Beyond individual choices, there are collective practices that make non-participation more viable. Supporting families of children with disabilities reduces the sense that avoiding such children is a moral necessity. Advocating for healthcare systems that do not penalize parents for

refusing embryo selection undercuts the economic logic of coercion. Teaching young people to value forms of character and vocation that are invisible to leaderboards loosens the grip of a narrow success narrative.

None of this eliminates suffering or uncertainty. It does, however, shift the frame from "I must control everything I can" to "I will act responsibly within limits, and those limits are part of what it means to receive a person rather than manufacture a product."

10.4 Final reflection: keeping the child a mystery rather than a product

The deepest alternative to market eugenics may be as simple, and as difficult, as this: allowing the child to remain a mystery. Mystery here does not mean ignorance for its own sake, or a refusal to use any medical knowledge. It means acknowledging that who a child will be is not fully available in advance, not even in a fully sequenced genome. It means accepting that some aspects of their life will surprise, disappoint, delight, and stretch us in ways no dashboard could predict.

To keep the child a mystery is to resist the impulse to translate every uncertainty into a risk score and every possibility into a choice. It is to recover the sense that something sacred happens when a new person comes into being, regardless of their measured advantages. That sense can be expressed in explicitly theological language, as in the idea of the child as an image-bearer or a gift from God. It can also be expressed in secular humanist terms, as a commitment to honor the irreducible uniqueness of each person.

From a logostic standpoint, this is an act of alignment with tau_child(t). It is a way of saying that the manifold of truth about a person includes dimensions that no optimization function can capture. In a world where q_world(t) is being pulled toward ever more granular control, choosing to leave some things unoptimized is a countercultural move.

Resisting market eugenics without swastikas does not require withdrawing from all technology or condemning every use of genetics. It requires drawing a line at the point where prediction becomes preemption of existence, where embryos are turned into entries on a leaderboard, and where parents are invited to think of their future children less as covenants and more as projects. To hold that line is to affirm, against the grain of the age, that the right response to a human life—even in its earliest, most vulnerable form—is welcome, not ranking.

11. References

Historical works on Nazi eugenics and biopolitics

Aly, G. (1999). *Cleansing the Fatherland: Nazi Medicine and Racial Hygiene*. Johns Hopkins University Press.

Burleigh, M. (1994). *Death and Deliverance: "Euthanasia" in Germany c. 1900–1945*. Cambridge University Press.

Friedlander, H. (1995). *The Origins of Nazi Genocide: From Euthanasia to the Final Solution*. University of North Carolina Press.

Lifton, R. J. (1986). *The Nazi Doctors: Medical Killing and the Psychology of Genocide*. Basic Books.

Proctor, R. (1988). *Racial Hygiene: Medicine under the Nazis*. Harvard University Press.

Weindling, P. (1989). *Health, Race and German Politics between National Unification and Nazism, 1870–1945*. Cambridge University Press.

Weindling, P. (2004). *Nazi Medicine and the Nuremberg Trials: From Medical War Crimes to Informed Consent*. Palgrave Macmillan.

Apartheid, biopolitics, and racialized population control

Dubow, S. (2014). *Apartheid, 1948–1994*. Oxford University Press.

Posel, D. (1991). *The Making of Apartheid, 1948–1961: Conflict and Compromise*. Oxford University Press.

Posel, D. (2001). "Race as Common Sense: Racial Classification in Twentieth-Century South Africa." *African Studies Review*, 44(2), 87–113.

Saul, J., & Bond, P. (Eds.). (2014). *South Africa: The Present as History*. James Currey.

Polygenic risk scores, complex traits, and embryo selection

Chabris, C. F., Lee, J. J., Cesarini, D., Benjamin, D. J., & Laibson, D. (2015). "The Fourth Law of Behavior Genetics." *Current Directions in Psychological Science*, 24(4), 304–312.

Karavani, E., Zuk, O., Zeevi, D., Barzilai, N., Stefanis, N. C., Hatzimanolis, A., … & Carmi, S. (2019). "Screening Human Embryos for Polygenic Traits Has Limited Utility for Disease Prevention." *Cell*, 179(6), 1424–1435.e8.

Mills, M. C., & Rahal, C. (2019). "A Scientometric Review of Genome-Wide Association Studies." *Communications Biology*, 2, 9.

Plomin, R. (2018). *Blueprint: How DNA Makes Us Who We Are*. MIT Press.

Turley, P., Meyer, M. N., Wang, N., Cesarini, D., Hammerschmidt, T., Harris, K. M., … & Benjamin, D. J. (2021). "Problems with Using Polygenic Scores to Select Embryos." *New England Journal of Medicine*, 385(1), 78–86.

Wray, N. R., Lin, T., Austin, J., McGrath, J. J., Hickie, I. B., Murray, G. K., & Visscher, P. M. (2021). "From Basic Science to Clinical Application of Polygenic Risk Scores: A Primer." *JAMA Psychiatry*, 78(1), 101–109.

NIVF, preimplantation genetic testing, and bioethics

De Wert, G., & Dondorp, W. (2010). "Preimplantation Genetic Diagnosis: The Ethics of Intermediate Cases." *Human Reproduction*, 25(4), 908–914.

Nuffield Council on Bioethics. (2018). *Genome Editing and Human Reproduction: Social and Ethical Issues*. Nuffield Council on Bioethics.

Robertson, J. A. (2003). "Extending Preimplantation Genetic Diagnosis: The Ethical Debate." *Human Reproduction*, 18(3), 465–471.

Sandel, M. J. (2007). *The Case Against Perfection: Ethics in the Age of Genetic Engineering*. Harvard University Press.

Savulescu, J. (2001). "Procreative Beneficence: Why We Should Select the Best Children." *Bioethics*, 15(5–6), 413–426.

Venture capital, platform capitalism, and biomedicine

Christensen, C., Grossman, J. H., & Hwang, J. (2009). *The Innovator's Prescription: A Disruptive Solution for Health Care*. McGraw-Hill.

Lazonick, W., & Mazzucato, M. (2013). "The Risk-Reward Nexus in the Innovation-Inequality Relationship: Who Takes the Risks? Who Gets the Rewards?" *Industrial and Corporate Change*, 22(4), 1093–1128.

Mazzucato, M. (2018). *The Value of Everything: Making and Taking in the Global Economy*. PublicAffairs.

Mirowski, P. (2011). *Science-Mart: Privatizing American Science*. Harvard University Press.

Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. PublicAffairs.

Holocaust, Jewish memory, and ethical reflection

Bauer, Y. (2001). *Rethinking the Holocaust*. Yale University Press.

Bauman, Z. (1989). *Modernity and the Holocaust*. Cornell University Press.

Browning, C. R. (1992). *Ordinary Men: Reserve Police Battalion 101 and the Final Solution in Poland*. HarperCollins.

Fackenheim, E. L. (1970). *God's Presence in History: Jewish Affirmations and Philosophical Reflections*. New York University Press.

Friedländer, S. (1997–2007). *Nazi Germany and the Jews* (2 vols.). HarperCollins.

Omer, A. (2019). *Days of Awe: Reimagining Jewishness in Solidarity with Palestinians*. University of Chicago Press.

Disability, vulnerability, and theological–ethical responses

Brock, B. (2019). *Wondrously Wounded: Theology, Disability, and the Body of Christ*. Baylor University Press.

Eiesland, N. L. (1994). *The Disabled God: Toward a Liberatory Theology of Disability*. Abingdon Press.

Reinders, H. (2011). *Disability, Providence, and Ethics: Bridging Gaps, Transforming Lives*. Baylor University Press.

Christian ethics, personhood, and biomedicine

Hauerwas, W. (1994). *God, Medicine, and Suffering*. Eerdmans.

Meilaender, G. (2013). *Bioethics: A Primer for Christians* (3rd ed.). Eerdmans.

O'Donovan, O. (2002). *Begotten or Made?* Eerdmans.

Ramsey, P. (1970). *Fabricated Man: The Ethics of Genetic Control*. Yale University Press.

Philosophical critiques of enhancement and control

Habermas, J. (2003). *The Future of Human Nature*. Polity Press.

Kass, L. R. (2002). *Life, Liberty and the Defense of Dignity: The Challenge for Bioethics*. Encounter Books.

Sandel, M. J. (2009). "The Case Against Perfection." In *Justice: What's the Right Thing to Do?* (pp. 45–69). Farrar, Straus and Giroux.

Prior logostic and Christian-ethical writings by the author

The author has published ~ 4,600 AI-assisted papers at: https://www.researchgate.net/profile/Douglas-Youvan/research . Google Scholar has indexed these preprints, and if you want a particular reference, the AI mode of a Google search (Gemini) has efficiently catalogued these preprints.